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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/623,049	10/12/2000	Norihisa Miyoshi	2000_1162A	5687

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Washington, DC 20006

EXAMINER

DUONG, THANH P

ART UNIT	PAPER NUMBER
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1764

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/623,049

Applicant(s)

MIYOSHI ET AL.

Examiner

Tom P. Duong

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 and 18-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 and 18-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on December 22, 2005 has been entered.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1-16 are rejected under 35 U.S.C. 102(b) as being anticipated by Ohshita et al. (4,823,740). Regarding claims 1-3, 5-7, 10-11, and 16, Ohshita discloses a fluidized-bed gasification furnace (Figure 1) utilizing a fluidized-bed reactor, said fluidized-bed gasification furnace comprising: a fluidized bed portion (fluidized zones A and B) for a fluidized medium, said fluidized bed portion having a fluidized bed floor portion (top surface of diffuser 52) at a bottom part thereof; a discharge port (area below baffles 50) provided in the vicinity of said fluidized bed floor portion for discharging the fluidized medium; a fluidized medium discharge chute (diffuser 52) having a medium-receiving end and a

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medium-discharge end, said medium-receiving end being connected to said discharge port and said fluidized medium discharge chute extending downwardly from said medium-receiving end connected to said discharge port to said medium-discharge end disposed below said discharge port; and a gas blow device (54, 55, 56) provided below said fluidized medium discharge chute for blowing a gas into said medium-discharge end of said fluidized medium discharge chute toward said medium-receiving end of said fluidized medium discharge chute; wherein a device (screw conveyor 70) for mechanically withdrawing the fluidized medium is provided in the vicinity of the lowermost part of said fluidized medium discharge chute; wherein said gas blow device is provided at the lowermost part of said fluidized medium discharge chute; wherein the fluidized bed reactor is divided into units (fluidized bed portion, diffuser, screw conveyor); wherein an outer wall (reactor wall 51) of said fluidized-bed gasification furnace is in a form of a rectangle. Regarding claims 4 and 8-9, the recitation of "said gas blow device uses steam, carbon dioxide, or oxygen-free gas as a gas to be blown" is directed to the contents thereof during an intended operation and does not impart further structural limitation to the claimed invention. See *Ex Parte Thibault*, 164 USPQ 666, 667, (Bd. App. 1969).

Regarding claims 6 and 12-15, the recitation of "so that said fluidized-bed reactor can easily deal with fuels having different properties by changing the combination of each units" has been interpreted as intended use and does not impart further structural limitation to the claimed invention (See MPEP 2114). Note, instant claims 1-16 structurally read on the apparatus of Ohshita '740.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 18-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ohshita '740 in view of Vidt (4,790,251). Regarding claims 18, 20, and 22-23, Ohshita '740 discloses Ohshita discloses a fluidized-bed gasification furnace (Figure 1) utilizing a fluidized-bed reactor, said fluidized-bed gasification furnace comprising: a fluidized bed portion (fluidized zones A and B) for a fluidized medium, said fluidized bed portion having a fluidized bed floor portion (top surface of diffuser 52) at a bottom part thereof; a discharge port (area below baffles 50) provided in the vicinity of said fluidized bed floor portion for discharging the fluidized medium; a fluidized medium discharge chute (diffuser 52) connected to said discharge port and extending downwardly from said discharge port to below said discharge port; a fluidized medium withdrawing device (screw conveyor 70) for mechanically withdrawing the fluidized medium, said fluidized medium withdrawing device being provided in the vicinity of the lowermost part of said fluidized medium discharge chute; and a gas blow device (54, 55, 56) for blowing a gas into an interior of said fluidized medium discharge

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chute, wherein said fluidized medium withdrawing device has a medium-receiving end at which fluidized medium is received from said fluidized medium discharge chute (diffuser 52) and a medium-discharge end to which the fluidized medium is transferred from said medium-receiving end said medium-receiving end being connected to said fluidized medium discharge chute; wherein said gas blow device (54, 55, 56) is located in the vicinity of said medium-receiving end of said fluidized medium withdrawing device (70); and wherein said medium-discharge end of said fluidized medium discharge chute is disposed below an entirety of said fluidized bed floor portion of said fluidized bed portion.

Ohshita '740 discloses the claimed invention but fails to disclose a gas blowing device is located below said fluidized medium withdrawing device. Vidt '251 teaches a gas blowing device (a purge gas source 65) is connected to the jacketed screw conveyor 11 (Col. 5, lines 34-40) and the purge gas reduces the stickiness of the ash particles and also prevent condensation of the sulfurous and sulfuric acid that sulfur dioxide and sulfur trioxide produce. Thus, it would have been obvious in view of Vidt '251 to one having ordinary skill in the art to modify the apparatus of Ohshita '740 with a gas blowing device as taught by Vidt '251 in order to reduces the stickiness of the ash particles and formation of sulfur dioxide and sulfur trioxide, which can increase corrosion in the inner wall of the reactor. Regarding claim 19, the recitation of "said gas blow device uses steam, carbon dioxide, or oxygen-free gas as a gas to be blown" is directed to the contents thereof during an intended operation and does not impart further structural limitation to the claimed invention. See *Ex Parte Thibault*, 164 USPQ 666, 667,

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(Bd. App. 1969). Regarding claim 21, the recitation of "so that said fluidized-bed reactor can easily deal with fuels having different properties by changing the combination of each units" has been interpreted as intended use and does not impart further structural limitation to the claimed invention (See MPEP 2114).

Response to Arguments

Applicants' arguments with respect to claims 1-16 and 18-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

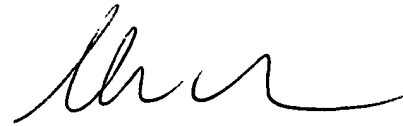
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tom P. Duong whose telephone number is (571) 272-2794. The examiner can normally be reached on 8:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Glenn Caldarola can be reached on (571) 272-1444. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tom Duong
March 1, 2006



Supervisory Patent Examiner
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